

January 12, 2010



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety Administration**

East Building, PHH – 30  
1200 New Jersey Avenue, Southeast  
Washington, D.C. 20590

DOT-SP 14919

EXPIRATION DATE: December 31, 2011
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(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: TK Holdings Inc.  
Armada, MI

2. PURPOSE AND LIMITATIONS:

a. This special permit authorizes the manufacture, marking, sale and use of a non-DOT specification cylinder (pressure vessel) for use as a component of automobile safety systems. The pressure vessel, charged with non-toxic, non-liquefied gases, is authorized for transportation in commerce subject to the requirements and limitations specified herein. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.

b. FIVE-YEAR TRANSPORTATION AUTHORIZATION: This special permit authorizes transportation of the pressure vessel identified herein for up to five years from the date of manufacture. This limitation does not apply to non-specification pressure vessels when installed in air bag modules. This special permit provides no certification of safety for end use environments and life cycles.

c. SPECIAL PERMIT SCOPE LIMITATIONS: This special permit only applies to a package when it is an article of commerce in transportation. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, incorporation as a component of a vehicle or other device, or other uses not associated with transportation in commerce.

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3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.301(a), 173.302a and 178.65(f)(2) in that a non-DOT specification cylinder is not authorized, except as specified herein.
5. BASIS: This special permit is based on the application of TK Holdings Inc. dated September 24, 2009 and additional information dated October 22, 2009, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Air bag inflators, Air bag modules, or Seat-belt pretensioner	9	UN3268	III
Non-toxic, non-liquefied gases and mixtures thereof/Proper shipping name as specified in §172.101	2.2	As appropriate	N/A

**NOTE:** A vehicle safety system or component which contains a quantity of pyrotechnic materials must be classed and approved as provided for in § 173.56 of the HMR. If the pyrotechnic material augments the volume of the gas in the pressure vessel, or in any way enhances the performance of the compressed gas, the device must be tested in the same configuration as when shipped.

7. SAFETY CONTROL MEASURES:
- a. PACKAGING - Packaging prescribed is a non-DOT specification cylindrical pressure vessel as shown on the TK Holdings drawings on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). The pressure vessel must be as described in the table below and the following requirements:

**January 12, 2010**Cylinder DiameterWater Capacity

30 mm

82.8 - 145 cm<sup>3</sup>

35 mm

155.4 - 207.1 cm<sup>3</sup>

(1) The maximum service pressure at 70°F may not exceed 9,434 psig. The minimum test pressure is the pressure of the contents at 212°F. The rated service pressure may not exceed 80 percent of the test pressure, and the water volume of each pressure vessel may not exceed one liter. The term "pressure of contents" as used in this special permit means the total pressure of all the materials to be shipped in the cylinder.

(2) Material of construction must conform to all requirements of § 178.65(b).

(3) Manufacturing requirements must conform to all requirements of § 178.65(c).

(4) The minimum wall thickness must be such that the wall stress meets the requirements of § 178.65(d).

(5) Openings and attachments must conform to all requirements of § 178.65(e) except the diameter of the circle as referenced in § 178.65(e) may not exceed 100%.

(6) Each pressure vessel must be equipped with a pressure relief device designed to meet all the requirements for a rupture disk prescribed in the Compressed Gas Association (CGA) Pamphlet S-1.1. The pressure relief device must be capable of preventing rupture of the pressure vessel when subjected to fire test conducted in accordance with CGA Pamphlet C-14.

b. TESTING -

(1) Each pressure vessel must be tested as required in § 178.65(f) except that-

(i) the hold time at test pressure specified in § 178.65(f)(1) may be limited to that which is adequate to ensure compliance with the requirements contained in § 178.65(f)(1), and

(ii) the maximum duration of the shift specified in § 178.65(f)(3) may be extended beyond 10 hours at the discretion of the inspector.

(2) The flattening test specified in § 178.65(g) is not required.

(3) A representative motor vehicle or aircraft safety system, packaged as it would be for shipment, must be activated and no materials other than non-toxic, non-flammable vapors or gases may be expelled from the package.

(4) A cylinder with a diameter less than 2 inches may burst at a location other than specified in §§ 178.65(f)(2)(ii) and (iii). However, all cylinders must be designed to have a burst pressure greater than or equal to 2.5 times the service pressure.

c. MARKING - Each pressure vessel must be durably marked as follows:

DOT SP - 14919 9434/11792

Lot No. XXXXXX-XXX

Manufacturer's Name

Date of Manufacturer

**This Pressure Vessel May Not Be Refilled**

Where 9434 represents the service pressure.

Where 11792 represents the test pressure.

Where XXXXXX-XXX is the lot number as appropriate.

**Note:** Each line of these markings may be placed without regard to location order on the pressure vessel.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

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b. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.

c. This special permit is limited to pressure vessels used as components of safety systems. The pressure vessels are excepted from the requirements of the HMR, Part 178 when the design has been certified by an Independent Inspection Agency approved under §107.803 as having met all the requirements of this special permit.

d. The Independent Inspection Agency's design certification must include test results and documents related to explosive classification and approval. A copy of the certification must be maintained at each facility where the safety system is manufactured and by the Independent Inspection Agency for a period of 15 years from the date of completion of the design certification.

e. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

f. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

g. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.

h. No modification may be made to the pressure vessel, pyrotechnic components or production safety system which would affect the performance of the safety system or its compliance with the requirements of the special permit until such modifications have been reviewed, tested and certified by an Independent Inspector as meeting the requirement of this special permit.

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- i. Devices utilizing the non-DOT specification pressure vessel authorized herein are exempt from the requirements of 49 CFR Parts 100-185 when installed in a motor vehicle or in completed motor vehicle components such as steering columns or door panels.
  - j. Pressure vessels, components and safety systems must be transported in strong outside packaging in accordance with § 173.301(a)(9).
  - k. Transportation of a Division 2.1 material (flammable gas) is not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Material Table in § 172.101.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, passenger-carrying aircraft (may not exceed the quantity limitation specified in § 172.101, column (9A), and cargo aircraft only. (See restriction in paragraph 8.k. above).
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
  - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
  - o Registration required by § 107.601 et seq., when applicable.

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Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety -- OHMSPA, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie  
Acting Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at

[http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm)

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PO: CWF